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# Sets, modular systems and interconnections: Comparing Singapore law with EU legislation

David Llewelyn\* and T. Prashant Reddy\*\*

## A. Introduction

Registered design law has become progressively more complicated over the decades as policymakers seek to accommodate an ever-growing list of demands, some general and some very specific. Two areas that pose curious challenges to the conceptual coherence of registered design law are, first, the protection offered to 'sets' and, secondly, the protection for modular systems in the light of the prohibition against design protection for features that facilitate interconnection. Whilst both Singapore and EU laws currently provide for registration of sets, only the EU system seems to make available specific protection for modular systems.

This short article compares the positions in the EU and Singapore on both these issues.

## B. The position in Singapore

Registered design law in Singapore is of a relatively recent vintage. The first law in the field was passed 20 years after Singapore became an independent nation in 1965 and was entitled the 'United Kingdom Designs (Protection) Act'.<sup>1</sup> As the name suggests, this Singaporean legislation protected and enforced only those designs registered in the UK under the Registered Designs Act, 1949. This statute was replaced in 2000 by the Registered Designs Act, 2000 (RDA).<sup>2</sup> This legislation created a Designs Registry in Singapore to register applications for protection of designs. The law was based on the UK Registered Designs Act, 1949 as amended by the UK Copyright, Designs and Patents Act 1988.<sup>3</sup> Both Singapore and UK registered design law has been amended subsequently and there are currently proposals to amend Singapore design law further. Notwithstanding those amendments in both countries, the underlying rationale and principles of Singapore registered design law are broadly similar to English law.

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## This article

- Singapore registered design law is largely based on UK legislation and, notwithstanding subsequent amendments, the underlying principles remain broadly similar. This article aims to compare Singapore registered design law with EU legislation in relation to sets, modular systems and interconnections.
- 'Sets of articles' are afforded protection under both Singapore law and EU registered design law. Under both regimes such protection can prove problematic, as under Singapore law it may require a court to make an artistic assessment as to whether the goods are of the same 'general character' and under EU law the Guidelines issued by the EUIPO appear to go far beyond the text of the Design Regulation. In addition, the advantages of this protection appear to be limited.
- The limited exception dealing to interconnecting design available under EU law is not available in Singapore. However, given the potential availability of other means of protection for such designs in Singapore, proposals for legislative reform that would incorporate this exception should be considered with caution.

One interesting and somewhat unusual aspect of Singapore law is the protection offered to a 'set of articles',

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1 Cap 339, 1995 rev. edn.

2 Cap 266, 2005 rev. edn.

3 George Wei Sze Shun, *Industrial Design Law in Singapore* (Academy Publishing, 2012), at [2.3] and [2.4].

which is a subset of the definition of ‘articles’ contained in the RDA’s definition section.<sup>4</sup> Protection as a registered design can be extended to any features of shape, configuration, pattern etc. applied to an article or ‘set of articles’. The phrase ‘set of articles’ is defined as follows:

‘set of articles’ means 2 or more articles of the same general character that are ordinarily on sale together or intended to be used together, and to each of which the same design, or the same design with modifications or variations not sufficient to alter the character or substantially to affect the identity of the design, is applied.

The law was recently amended to include ‘non-physical products’ within its ambit.<sup>5</sup>

The provision appears to be aimed at the protection of articles that are supposed to be used together. For example, a set of tableware consisting of plates, bowls, cups and cutlery, all featuring the same design may be protected together as a ‘set of articles’. Another useful example of what may be covered is a furniture set consisting of chairs, tables etc, where a similar design is applied across the individual components of the set. The advantages of including such subject matter in a single application is that it reduces the number of filings for the designer. Instead of filing multiple applications for each and every article in the set, the designer is permitted to file just one application claiming protection for the entire set. This helps in ensuring greater procedural efficiency and lowering costs, particularly for SMEs. The problem however lies with the difficulty of determining the defining features of a ‘set’.

The qualifying features for a ‘set of articles’, as laid down in the definition reproduced above, can be simplified into the following:

- (i) The articles should be of the same general character;
- (ii) The articles should ordinarily be on sale together; or intended to be used together; and
- (iii) The articles should have the same design or the same design with modifications or variations not sufficient to alter the character or substantially to affect the identity of the design that is the subject of the application.

Each of these qualifying features requires a qualitative and, perhaps, an artistic assessment of the different articles in the set before one can judge whether such a set should qualify for protection. Whilst one can certainly envisage relatively simple examples of a set of cutlery or a sofa set which would easily fit the definition of ‘set of articles’, the assessment becomes more difficult if

an applicant decides to seek protection for a set of articles which, although unconventional to a normal person, is viewed through the eyes of the applicant as a ‘set of articles’. In such a case, how are competitors or the courts supposed to assess the ‘general character’ of the articles and determine whether these articles are ordinarily on sale together or intended to be used together and whether the design is substantially the same without altering the character or identity of the design? These questions are important because design applications are often for artistic works that have a creative element. Is it prudent to expect judges to don the hat of an expert art critic to assess the aesthetics and finesse of the design as applied on the article in order to answer the questions raised above?

Historically, UK registered design law has contained a requirement that a design appeal to the eye. Such a requirement has existed in the UK since the Patents and Designs Act, 1919. To be judged solely by the eye does not mean that the design should be praiseworthy or beautiful but only that it should perform some role in drawing the attention of the customer.<sup>6</sup> The requirement was described by Lord Reid in the House of Lords:<sup>7</sup>

This does not mean that the ‘appeal’ or the attraction must be to an aesthetic or artistic sense—though in some cases it may be. The features may be such that they gain the favour of or appeal to some while meeting with the disfavour of others. Beyond being merely visible the feature must have some individual characteristic. It must be calculated to attract the attention of the beholder.

The threshold under UK law has therefore been quite a low one and requires no assessment of the artistic merit or otherwise of the design. Judgments by Singapore courts prior to the coming into force of the new law in 2000 adopted this test of judging designs ‘solely by the eye’.

However, although the RDA is based on the earlier UK registered design law, it does not specifically require that the design be judged by its appeal to the eye. The definition of design in Section 2 RDA is limited to ‘features of shape, configuration, pattern or ornament applied to an article by any industrial process’. The UK requirement that the design be judged ‘solely by the eye’ was omitted from the RDA. So how then are designs to be registered under Singapore law? It is submitted that although there is no mention in the statute of the requirement to be judged by the eye, there is simply no other way to judge whether a design qualifies for protection if not with the eye. To that extent it may be argued that the test of ‘solely by the eye’ remains

<sup>4</sup> Section 2 of the Registered Designs Act, 1949.

<sup>5</sup> Registered Designs (Amendment) Act, 2017.

<sup>6</sup> Wei, *ibid*, at [69].

<sup>7</sup> *Amp Inc v Utilux Pty Ltd* [1971] FSR 572 at 582.

implicit in Singapore law, even though it cannot have been accidental that it was omitted from the statute.

Given this low and relatively objective threshold to judge whether a particular design qualifies for protection under the RDA, how is a competitor or a court supposed to interpret the phrases ‘general character’, ‘ordinarily be on sale together’, ‘intended to be used together’ or ‘same design with modifications or variations not sufficient to alter the character or substantially to affect the identity of the design’ in the context of a registered design in respect of a set of articles?

There is little doubt that, in the event of a dispute as to registrability, a court would have to make a subjective assessment of a ‘set of articles’ based on its own artistic assessment (possibly aided by expert evidence) to determine whether the different articles are of the same ‘general character’ and are required to be sold together. While such assessments would be relatively easy to make in the case of a set of cutlery or a sofa set, the outcome would not be as predictable if an applicant tries experimenting with more creative ‘sets’. Presume, for example, a maverick designer who tries to rely on the ‘set of articles’ provision to seek protection for a set of stainless steel forks and spoons along with a ceramic mug and a porcelain plate. All of these articles feature designs which in the designer’s view are similar. It seems that the only way for a judge to assess whether such items fulfil the statutory criteria in the definition of ‘set of articles’ is by donning the hat of an art critic (albeit one who relies on competing experts for advice). It is not easy to conceive of how otherwise a judge would be in a position to conclude whether the articles have the ‘same design with modifications or variations not sufficient to alter the character or substantially to affect the identity of the design’. It can certainly be argued that there is simply no objective standard to apply when carrying out such an assessment.

Another important question that may be presented in the context of ‘sets’ is that arising from a scenario in which one of the articles in a set has already been protected in the past as an individual article, while the remaining articles in the set are new. Is it legitimate for such an article which has already been protected individually to be protected subsequently as part of a set, or, to put the question another way, does the whole of the set have to be novel? There is no clear answer to this question. Section 5 RDA states that a design shall not be considered ‘new’ if it has previously been registered or published in Singapore or elsewhere. This provision however is not clear on how it is to be applied in the context of a set of articles. Although a design on an article may have been registered earlier, it certainly attains a new context when placed within a ‘set’. Should

it then be protected under the RDA or would it be the case that because it was previously individually protected, it should not be protected once again as a part of a ‘set’? The logical interpretation is to follow Section 5 and disqualify any article previously protected in its individual capacity. Such an interpretation does now flow automatically from the legislation but is based on a purposive interpretation of the law, that is, the law should not be used to evergreen design registrations.

Similar issues will arise in the context of infringement, co-ownership, declarations of non-infringement and revocation proceedings because the RDA provisions on these are based on the UK law which does not contain a provision to protect ‘sets’. This leaves to the courts considerable leeway to shape the law. In itself this is not an undesirable outcome in a common law setting but a more pertinent question is, what exactly is the benefit of retaining this provision in the law? The only benefit would seem to be that it reduces costs for certain designers who seek protection for sets as, rather than filing multiple applications, they can seek protection through just one application. However, the cost of permitting this is the introduction of considerable uncertainty as to the scope of protection accorded by including a ‘set of articles’ in a single design application. It can certainly be argued that the benefits of the approach (to attract more applicants from impecunious designers) outweigh the possible uncertainty caused by the vague definition of ‘set of articles’. However, if reducing costs for small businesses was the aim, there are other ways of achieving that. For example, policy-makers could provide fee waivers, subsidies or lower costs for those classes of applicants.

## C. The position in the European Union on the protection of ‘set of articles’

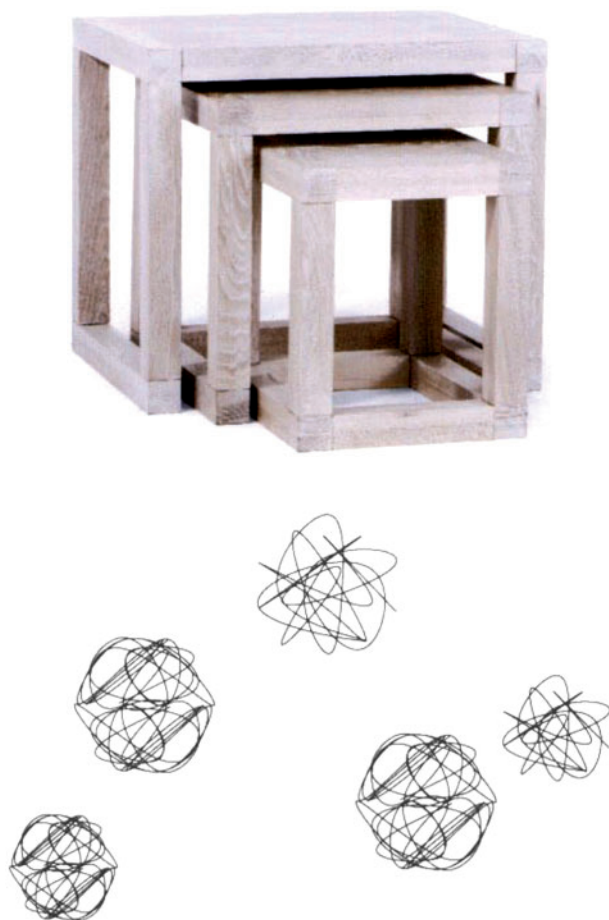
Unlike Singapore, the European Union’s legal framework for protection of designs, that is, Directive 98/71/EC on the legal protection of designs (Design Directive) and the Council Regulation (EC) No. 6/2002 on Community Designs (Design Regulation) does not have a specific provision allowing protection of a ‘set of articles’ in a single design application. However, this hasn’t stopped the EUIPO from offering such protection through office guidance that *prima facie* appears to lack a basis in the actual text of the Design Directive and the Design Regulation. The ‘Guidelines for Examination of Registered Community Designs’ issued by the EU IPO suggest protection is available for a ‘set of articles’ on the ground that this can qualify as a ‘product’ within the definition of Article 3 of the



**Design Regulations.** These Guidelines define a 'set of articles' as a 'group of products of the same kind which are generally regarded as belonging together and are so used'.<sup>8</sup> The Guidelines also state that the 'set of articles' can be represented in a single design application:

if the articles making up this set are linked by aesthetic and functional complementarity and are, in normal circumstances, sold altogether as one single product, like a chess board and its pieces or sets of knives, forks and spoons.

The only other express requirement set out in the Guidelines is that it must 'be clear from the representation that protection is sought for a design resulting from the combination of the articles making up the set, and not for each article separately'. Two illustrative examples of such applications are as follows:<sup>9</sup>



The obvious question is whether this interpretation is within the bounds of the definition of 'product' in Article 3 as claimed in the Guidelines? Prima facie, it appears that the Guidelines have gone far beyond the text of the Design Regulation and are questionable. There is no mention in Article 3 of the Regulation of the phrase 'article', or 'aesthetic and functional complementarity' or 'set of articles' that 'sold together as a single product'. A literal interpretation of the definition of 'product' in Article 3 would cover only individual 'items' or 'parts' of a 'complex product', which in itself is an entirely separate concept.

The only advantage of adopting this confusing approach to 'sets of articles' is that it reduces the transaction fees for designers by allowing them to club together designs for multiple objects in one application. But, as explained earlier, if the sole aim of this policy is to reduce costs it is perhaps better to do so by changing the fee schedule rather than tampering with the basic concepts of design law.

## D. Protection of modular components under European design law: Lessons for Singapore?

One of the most contentious issues in modern design law has been the issue of spare parts and the extent to which they deserve legal protection. The debate has been fuelled primarily by concerns that there exists a secondary market for spare parts in the automobile industry which is not as competitive as it should be because of design protection and, as a result, consumers end up paying more than they should for such spare parts.<sup>10</sup> The debate involves three different fields: the 'must fit' exclusion, the 'must match' exclusion and the exemption for the purposes of repair.

The 'must fit' exclusion excludes design protection for those aspects of a product which are required to be reproduced to permit interconnection with an existing product, so that either product may carry out its respective function. The 'must match' exclusion, on the other hand, disallows design protection for those components that as a practical matter necessarily must resemble the appearance of other parts, such as the wing panel of a car (which must match the other wing panel).

<sup>8</sup> Guidelines for Examination of Registered Community Designs, European Union Intellectual Property Office (EUIPO) (2016), available at: [https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document\\_library/contentPdfs/law\\_and\\_practice/designs\\_practice\\_manual/WP\\_1\\_2017/TC/examination\\_of\\_applications\\_for\\_registered\\_community\\_designs\\_tc\\_en.pdf](https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/contentPdfs/law_and_practice/designs_practice_manual/WP_1_2017/TC/examination_of_applications_for_registered_community_designs_tc_en.pdf) (last accessed 2 December 2017).

<sup>9</sup> EUIPO Registered Design Number: 000465679-0016 & EUIPO Registered Design Number 001175426-0009.

<sup>10</sup> See generally, Proposal for a Directive of the European Parliament and of the Council amending Directive 98/71/EC on the legal protection of designs (SEC(2004) 1097), available at: [http://ec.europa.eu/smart-regulation/impact/ia\\_carried\\_out/docs/ia\\_2004/sec\\_2004\\_1097\\_en.pdf](http://ec.europa.eu/smart-regulation/impact/ia_carried_out/docs/ia_2004/sec_2004_1097_en.pdf) (accessed 2 December 2017).

Singapore excludes registered design protection for the categories of ‘must fit’ and ‘must match’ designs. The definition of ‘design’ in Section 2 of the RDA excludes from the definition those ‘features of shape or configuration of an article’ which ‘are dependent upon the appearance of another article of which the article is intended by the designer to form an integral part’ or which ‘enable the article to be connected to, or placed in, around or against, another article so that either article may perform its function’.

The European debate on such exclusions has been going on since the late 1980s and there is still a lack of uniformity amongst the various Member States of the EU on the degree of protection offered to spare parts. Article 8(2) of the Design Regulation, however, does require all Member States to deny design protection:

in features of appearance of a product which must necessarily be reproduced in their exact form and dimensions in order to permit the product in which the design is incorporated or to which it is applied to be mechanically connected to or placed in, around or against another product so that either product may perform its function.

However, EU law offers a limited exception to the prohibition contained in Article 8(2) for modular systems. In relevant part, Article 8(3) of the Design Regulation states:

Notwithstanding paragraph 2, a Community design shall under the conditions set out in Articles 5 and 6 subsist in a design serving the purpose of allowing the multiple assembly or connection of mutually interchangeable products within a modular system.

The accompanying recital explains the rationale for the provision: ‘The mechanical fittings of modular products may nevertheless constitute an important element of the innovative characteristics of modular products and present a major marketing asset, and therefore should be eligible for protection.’

This particular provision is informally referred to as the ‘Lego exemption’ because the provision was allegedly inserted into the law due to lobbying by the Danish to protect the interests of the well-known Danish company Lego, which manufactures toy building blocks for children. The prohibition against design protection for interconnection would have disqualified the building blocks from design protection and hence the exemption in Article 8(3). Regardless of the stories of lobbying by the

Danish and Lego, some commentators have pointed out that there is a general justification for providing such an exemption. Unlike other markets where Article 8(2) extinguishes protection only for the secondary markets like spare parts, and not the primary market for the car itself, in the case of modular systems like Lego’s building block, Article 8(2) would effectively wipe out protection for the building blocks themselves because their very purpose is to ensure interconnection. The fear is that, ‘If the interface could be copied freely, third parties were put in a position to capture the entire market.’<sup>11</sup>

The EUIPO explains on its website that ‘A modular system is a number of items that are designed to be connected in a number of ways. A typical example would be building blocks or tiles for children. This notion is also of particular relevance to the furniture industry as it includes items such as desks and tables, which may consist of a number of smaller tables that can be assembled in alternative configurations.’<sup>12</sup>

The EUIPO also explains how to differentiate between a modular system from a system of design of interconnections. It states in relevant part, ‘Interconnections are product features that enable it to be assembled or mechanically connected with another product, for example a plug connection or an exhaust pipe. These need to have specific shapes and dimensions to fit with a car. Interconnections don’t usually include alternative configurations as in the case of modular systems.’<sup>13</sup>

In a review of the EU Design Directive, published in 2016, the European Commission stated boldly that the lack of a definition of the phrase ‘modular system’ had not created any ‘interpretation issues at the national level’. The review also found that ‘No noteworthy issues at national level were identified’ in regard to the interconnection exception under the EU design law.<sup>14</sup>

The simple issue that remains to be answered is whether a country like Singapore should offer similar protection for modular systems? This would require an amendment to the existing definition of ‘designs’ under the RDA. Is such an amendment worth the trouble?

The answer would depend on three factors.

First, would Lego-like blocks or modular furniture be disqualified under current Singapore law because of the prohibition on protecting interconnections under the definition of ‘design’ extends only if an article is being connected or placed in around or against ‘another’ article. Would Lego-like building blocks or

11 Anette Kur, ‘Industrial Design Protection in Europe – Directive and Community Design’, in S. K. Verma and Raman Mittal (eds), *Intellectual Property Rights: A Global Vision* (2004), available at: <http://hdl.handle.net/123456789/730> (accessed 2 December 2017).

12 General questions EUIPO: <https://euipo.europa.eu/ohimportal/en/cd-general-questions#1.8> (accessed 2 December 2017).

13 General questions EUIPO: <https://euipo.europa.eu/ohimportal/en/cd-general-questions#1.8> (accessed 2 December 2017).

14 Legal Review on Industrial Design Protection in Europe, European Commission (2016), available at: <https://www.prv.se/globalassets/in-swedish/ip-professionell/aktuellt/design-study---final-report.pdf> (accessed 2 December 2017).

modular furniture be considered to be ‘another’ article or the same article? In our opinion, they would not be considered to be ‘another article’ and therefore it may be possible to protect such type of blocks or modular furniture systems under the current scheme of the law without importing a EU-style specific provision for modular systems.

Secondly, and this is perhaps the most important factor, it must be questioned whether there is really a demand in Singapore for such protection for modular systems, from those who are using the design system. There is no point in changing the law for the sake of doing so, if there is no real demand for such protection.

Thirdly, it seems possible to protect both the novel building blocks type of product and modular components in the furniture industry under other IP laws that are better suited to protect such creativity and innovation without the confusion associated with interconnection in registered design law. This is a relevant question to ask because Lego has had a long and illustrious history of pushing the sides of the envelope that is the IP system by using the different IP laws to obtain as close as it is possible to get to a perpetual monopoly. For largely historical reasons, it is possible to game legitimately the IP system in such a manner, especially with deep pockets to fund the inevitable litigation that will result, because there is considerable overlap in what the different IP laws may be used to protect. Thus, an astute business may obtain either or both cumulative and sequential protection under different IP laws for one and the same product. For example, while the shape of a certain article may be protected under registered design law, the moment that shape becomes an identifier of the brand, it may be possible to protect such shape under trade mark law as an indication of trade origin. Notwithstanding valiant attempts to draw bright lines between different IP laws, the task has proved impossible and wily IP players will exploit overlaps to seek as broad

as possible and as long-lasting as possible IP protection. It may therefore be possible to protect building block systems under trade mark law and the law of passing off (as Lego has tried in recent years). Similarly, modular furniture could perhaps be protected under patent law or copyright law or even conventional registered design law by seeking protection for the entire modular system as a whole. In any event, the exception for ‘interconnection’ in registered design law covers only the feature that facilitates interconnection. Modular furniture as a whole can still be protected under registered design law. In addition, it may be possible to protect the disassembled furniture as a ‘set of articles’.

## Conclusion

The legal protection of design has become more complicated and confusing over the years. The protection offered to a ‘set of articles’ and modular components are but two, relatively minor examples of this. As discussed, there is little theoretical justification for the provision regarding ‘sets of articles’. If its aim was the laudable one of reducing costs for designers, it would have been better to revisit the fee schedule. On the other hand, if the aim was to reduce the paperwork for both the applicant and the designs registry, then policy makers should have considered the possibility of reworking filing procedures to make the process more efficient. Bending registered design law theory out of a coherent shape in order to streamline the logistics involved with filing of multiple design applications is quite simply a bad idea and to be discouraged. Similarly, as regards the special exception for modular components under EU law, there does not appear to be any pressing need for such a provision. The fact that it seems to have been the brainchild of a particular lobby is reason enough to be cautious before intruding such a provision in countries like Singapore. Legislative response to a particular and narrow demand rarely results in either coherence or a balanced system.